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I Claim ~~Claims~~

1. An injector for a fuel injection system for internal combustion engines, having a high-pressure connection (3), wherein the high-pressure connection (3) communicates hydraulically with an inflow conduit (13) via a bore (5), characterized in that a conduit (15) to the system pressure supply branches off from the bore (5), and that a bush (9) with a longitudinal bore (11) is disposed in the bore (5).
2. The injector of claim 1, characterized in that there is a play, in particular of 6 to 8 μm , between the bore (5) and the bush (9).
3. The injector of claim 1 or 2, characterized in that on one end of the bush (9), the longitudinal bore (11), bush (9) and bore (5) are sealed off from one another, and that in the region of this end, the conduit (15) to the system pressure supply branches off from the bore (5).
4. The injector of claim 1 or 2, characterized in that both ends of the bush (9) are approximately equally far away from the branching point of the conduit (15).
5. The injector of one of the foregoing claims, characterized in that the injector has a leak fuel return line.
6. The injector of claim 5, characterized in that the leak fuel return line communicates with the conduit (15) to the system pressure supply.
7. The injector of claim 5 or 6, characterized in that a pressure holding valve (18) is disposed in the leak fuel return line.

8. The injector of one of the foregoing claims, characterized in that the pressure holding valve (18) maintains a minimum pressure, in particular of 15 to 20 bar, in the conduit (15) to the system pressure supply.

9. The injector of one of the foregoing claims, characterized in that the injector has a piezoelectric actuator.

10. The injector of claim 9, characterized in that the injector between the piezoelectric actuator and a control valve, a hydraulic booster is present, which is filled via the conduit (15) to the system pressure supply.

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